

Name: _____

Date: _____

Understanding SQL: Somerset Cars

A car dealer stores data about the cars in their showroom. Figure 1 shows the data returned from the database when the SQL statement `SELECT * FROM Cars` is executed.

CarID	Make	Model	Year	ValidMOT	Price	Colour
001	Audi	A3 Sport	2012	TRUE	10000	Black
002	Nissan	Qashqai	2010	TRUE	8000	Orange
003	Peugeot	206	2005	FALSE	400	Black
004	Audi	A6	2010	TRUE	7095	Blue
005	Audi	Q3 Sport	2018	TRUE	27095	Blue
006	Volkswagen	Golf	2013	FALSE	13049	Red
007	Volkswagen	Polo	2009	TRUE	7000	White
008	Ford	Focus	2010	TRUE	3949	White
009	BMW	Mini	2012	FALSE	6999	Purple
010	BMW	1 series	2017	TRUE	17000	White

Figure 1: Cars table

BRONZE Challenges: ANSWERS

Q	Answer
1	<p>Give the SQL statement that would be needed to show all red cars. Only the Make, Model and Colour fields should be displayed.</p> <pre>SELECT Make, Model, Colour FROM Cars WHERE Colour = 'Red'</pre>
2	<p>Give the SQL statement that would be needed to show all cars made by BMW. All fields must be displayed in your results.</p> <pre>SELECT * FROM Cars WHERE Make = 'BMW'</pre>
3	<p>Give the SQL statement that would be needed to show all cars made in the year 2010. Only the Make and Model should be shown.</p> <pre>SELECT Make, Model FROM Cars WHERE Year = 2010</pre>
4	<p>Give the SQL statement that would be needed to show all cars with a valid MOT. All fields must be displayed in your results.</p> <pre>SELECT * FROM Cars WHERE ValidMOT = True</pre>
5	<p>Give the SQL statement that would be needed to show all cars not made by Nissan. All fields must be displayed in your results.</p> <pre>SELECT * FROM Cars WHERE Make != 'Nissan'</pre>

CarID	Make	Model	Year	ValidMOT	Price	Colour
001	Audi	A3 Sport	2012	TRUE	10000	Black
002	Nissan	Qashqai	2010	TRUE	8000	Orange
003	Peugeot	206	2005	FALSE	400	Black
004	Audi	A6	2010	TRUE	7095	Blue
005	Audi	Q3 Sport	2018	TRUE	27095	Blue
006	Volkswagen	Golf	2013	FALSE	13049	Red
007	Volkswagen	Polo	2009	TRUE	7000	White
008	Ford	Focus	2010	TRUE	3949	White
009	BMW	Mini	2012	FALSE	6999	Purple
010	BMW	1 series	2017	TRUE	17000	White

Figure 1: Cars table

Q		Answer
6	Give the SQL statement that would be needed to show all cars except ones which are red. All fields must be displayed in your results.	<pre>SELECT * FROM Cars WHERE Colour != 'Red'</pre>
7	Give the SQL statement that would be needed to show all cars over £10,000. Only the Make, Model and Price should be displayed.	<pre>SELECT Make, Model, Price FROM Cars WHERE Price > 10000</pre>
8	Give the SQL statement that would be needed to show all cars before 2012. All fields must be displayed in your results.	<pre>SELECT * FROM Cars WHERE Year <2012</pre>
9	Give the SQL statement that would be needed to show all cars costing £7000 or less. Only the Make, Model and Price should be displayed.	<pre>SELECT Make, Model, Price FROM Cars WHERE Price <=7000</pre>
10	Give the SQL statement that would be needed to show all cars made in the year 2004 or after. Only the Model and Price should be displayed.	<pre>SELECT Model, Price FROM Cars WHERE Year >=2004</pre>

CarID	Make	Model	Year	ValidMOT	Price	Colour
001	Audi	A3 Sport	2012	TRUE	10000	Black
002	Nissan	Qashqai	2010	TRUE	8000	Orange
003	Peugeot	206	2005	FALSE	400	Black
004	Audi	A6	2010	TRUE	7095	Blue
005	Audi	Q3 Sport	2018	TRUE	27095	Blue
006	Volkswagen	Golf	2013	FALSE	13049	Red
007	Volkswagen	Polo	2009	TRUE	7000	White
008	Ford	Focus	2010	TRUE	3949	White
009	BMW	Mini	2012	FALSE	6999	Purple
010	BMW	1 series	2017	TRUE	17000	White

Figure 1: Cars table

SILVER Challenges: ANSWERS

Q		Answer
1	Give the SQL command that would be needed to show all cars made by BMW or Audi. Only the Make, Model and Colour needs to be displayed.	<pre>SELECT Make, Model, Colour FROM Cars WHERE Make = 'Audi' OR Make = 'BMW'</pre>
2	Give the SQL command that would be needed to show all red cars over £3000. Only the Make, Model and Price fields should be displayed.	<pre>SELECT Make, Model, Price FROM Cars WHERE Colour = 'Red' AND Price >3000</pre>
3	Give the SQL command that would be needed to show all cars which are a Mini or have a valid MOT . Only the Make and Model should be shown.	<pre>SELECT Make, Model FROM Cars WHERE Model = 'Mini' AND ValidMOT = TRUE</pre>
4	Give the SQL command that would be needed to show all cars with a valid MOT and were made before 2010. All fields must be displayed in your results.	<pre>SELECT * FROM Cars WHERE ValidMOT = True AND Year <2010</pre>
5	Give the SQL command that would be needed to show all cars before 2012 and are red in colour. All fields must be displayed in your results.	<pre>SELECT * FROM Cars WHERE Year <2012 AND Colour = 'Red'</pre>
6	Give the SQL command that would be needed to show all cars not made by Nissan or Ford. The Make, Model, Colour and Price must be displayed in the results.	<pre>SELECT Make, Model, Colour, Price FROM Cars WHERE Make != 'Nissan' AND Make != 'Ford'</pre>

CarID	Make	Model	Year	ValidMOT	Price	Colour
001	Audi	A3 Sport	2012	TRUE	10000	Black
002	Nissan	Qashqai	2010	TRUE	8000	Orange
003	Peugeot	206	2005	FALSE	400	Black
004	Audi	A6	2010	TRUE	7095	Blue
005	Audi	Q3 Sport	2018	TRUE	27095	Blue
006	Volkswagen	Golf	2013	FALSE	13049	Red
007	Volkswagen	Polo	2009	TRUE	7000	White
008	Ford	Focus	2010	TRUE	3949	White
009	BMW	Mini	2012	FALSE	6999	Purple
010	BMW	1 series	2017	TRUE	17000	White

Figure 1: Cars table

Q		Answer
7	Give the SQL command that would be needed to show all cars between £10,000 and £15,000. All fields must be displayed in your results and the models should be sorted in alphabetical order.	<pre>SELECT * FROM Cars WHERE Price >=10000 AND Price <=15000 ORDER BY Model ASC</pre>
8	Give the SQL command that would be needed to show all cars costing £7000 or less and are black. Only the Make, Model and Price should be displayed and the cheapest cars should appear at the top.	<pre>SELECT Make, Model, Price FROM Cars WHERE Price <7000 AND Colour = 'Black' ORDER BY Price ASC</pre>
9	Give the SQL command that would be needed to show all cars made in between the years 2012 and 2017. Only the Model and Price should be display and the newest cars should be displayed at the top.	<pre>SELECT Model, Price FROM Cars WHERE Year >=2012 AND Year <=2017 ORDER BY Year DESC</pre>
10	Give the SQL command that would be needed to show all cars not made by Nissan and are either black or blue in colour. All fields must be displayed in your results and should be grouped by Make.	<pre>SELECT * FROM Cars WHERE Make !='Nissan' AND Colour = 'Black' OR Colour = 'Blue' ORDER BY Make ASC</pre>

CarID	Make	Model	Year	ValidMOT	Price	Colour
001	Audi	A3 Sport	2012	TRUE	10000	Black
002	Nissan	Qashqai	2010	TRUE	8000	Orange
003	Peugeot	206	2005	FALSE	400	Black
004	Audi	A6	2010	TRUE	7095	Blue
005	Audi	Q3 Sport	2018	TRUE	27095	Blue
006	Volkswagen	Golf	2013	FALSE	13049	Red
007	Volkswagen	Polo	2009	TRUE	7000	White
008	Ford	Focus	2010	TRUE	3949	White
009	BMW	Mini	2012	FALSE	6999	Purple
010	BMW	1 series	2017	TRUE	17000	White

Figure 1: Cars table

GOLD Challenges: ANSWERS

Q	Answer
<p>1 Give the SQL command that would be needed to show all cars where the model name begins with the letter "Q". Only the Make, Model and Colour needs to be displayed.</p>	<pre>SELECT Make, Model, Colour FROM Cars WHERE Model LIKE 'Q%'</pre>
<p>2 Give the SQL command that would be needed to show all cars with a colour ending in the letter "e". Only the Make, Model and Price fields should be displayed.</p>	<pre>SELECT Make, Model, Price FROM Cars WHERE Colour LIKE '%e'</pre>
<p>3 Give the SQL statement that would be needed to show all cars where the make contains the letter "u". Only the Make should be shown.</p>	<pre>SELECT Make FROM Cars WHERE Make LIKE '%u%'</pre>
<p>4 Give the SQL statement that would be needed to show all cars where the make starts with the letter "a" or "b". All fields must be displayed in your results.</p>	<pre>SELECT * FROM Cars WHERE Make LIKE 'a%' OR Make LIKE 'b%'</pre>

CarID	Make	Model	Year	ValidMOT	Price	Colour
001	Audi	A3 Sport	2012	TRUE	10000	Black
002	Nissan	Qashqai	2010	TRUE	8000	Orange
003	Peugeot	206	2005	FALSE	400	Black
004	Audi	A6	2010	TRUE	7095	Blue
005	Audi	Q3 Sport	2018	TRUE	27095	Blue
006	Volkswagen	Golf	2013	FALSE	13049	Red
007	Volkswagen	Polo	2009	TRUE	7000	White
008	Ford	Focus	2010	TRUE	3949	White
009	BMW	Mini	2012	FALSE	6999	Purple
010	BMW	1 series	2017	TRUE	17000	White

Figure 1: Cars table

Q		Answer
5	Give the SQL statement that would be needed to show all cars where the colour starts with the letter "B" and are under £10,000. The Make, Model, Colour and Price must be displayed in the results.	<pre>SELECT Make, Model, Colour, Price FROM Cars WHERE Colour LIKE 'B%' AND Price <10000</pre>
6	Give the SQL statement that would be needed to show all car brands which contain the word "wagen". All fields must be displayed and grouped by model.	<pre>SELECT * FROM Cars WHERE Make LIKE '%wagen%' ORDER BY Model ASC</pre>
7	Give the SQL statement that would be needed to show all cars which contain a colour starting with "bl" and are either made by Audi or Volkswagen. All fields must be shown and should be displayed from most expensive to cheapest.	<pre>SELECT * FROM Cars WHERE Colour LIKE 'bl%' AND Make = 'Audi' OR Make = 'Volkswagen' ORDER BY Price DESC</pre>